

**Notice of Allowability**

Application No.

10/604,062

Examiner

Mary C. Jacob

Applicant(s)

FLEURY ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE, filed 6.15.07.
2. ☒ The allowed claim(s) is/are 1,3-19 and 21-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

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### **DETAILED ACTION**

1. The response filed on 6/15/07 has been received and considered. Claims 1, 3-19, 21-36 are presented for examination.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/15/07 has been entered.

#### ***Drawings/Specification***

3. The amendments to the specification and the replacement sheet for Figure 5 have been received and considered.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The rejections of the claims under 35 U.S.C. 112, second paragraph, recited in the Office Action, dated 11/21/06, have been withdrawn in view of the amendments to the claims filed 6/15/07.

***Claim Rejections - 35 USC § 102***

6. The rejections of the claims under 35 U.S.C. 102(b), recited in the Final Office Action dated 11/21/06, have been withdrawn in view of the amendments to the claims, filed 6/15/07.

***Claim Rejections - 35 USC § 103***

7. The rejections of the claims under 35 U.S.C. 103(a) recited in the Final Office Action dated 11/21/06, have been withdrawn in view of the amendments to the claims, filed 6/15/07.

***Response to Arguments***

8. Applicant's arguments, see pages 19-23, filed 6/15/07, with respect to Claims 1, 3-19, 21-36 have been fully considered and are persuasive. The rejections of Claims 1, 3-19, 21-36 as being anticipated by Plumb have been withdrawn.

***Allowable Subject Matter***

9. Claims 1, 3-19, 21-36 are allowed.

10. The following is an examiner's statement of reasons for allowance: While Plumb et al (US Patent 6,078,867) teaches generating a three-dimensional graphical representation of a borehole that is color mapped according to borehole ellipticity and lithology, Neff et al (US Patent 6,665,117) teaches the mapping of seismic 3D data onto a 3D display surface, and Sanstrom (US Patent 6,801,197) teaches a 3D visualization of an earth model that includes the display of drilling operational data along the wellbore trajectory, none of these references taken either alone or in combination of the prior art of record disclose displaying a plurality of measurement data along a borehole trajectory, including:

(claim 1, 19) "displaying a second layer extending radially outward from the first layer, wherein the second layer represents at least one of the plurality of measurement data along the borehole trajectory", and

(claim 4, 5, 22, 23) "displaying a third layer, wherein the third layer has a different diameter than the second layer", "wherein the different diameter represents a different depth of investigation",

in combination with the remaining elements and features of the claimed invention. It is for these reasons that the applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Neff et al (US Patent 6,665,117) teaches the display of borehole data on a three-dimensional surface.
13. Margadant et al (US Patent 6,606,089) teaches the generation of a three dimensional object from a spatially resolved data set.
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner can normally be reached on M-F 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

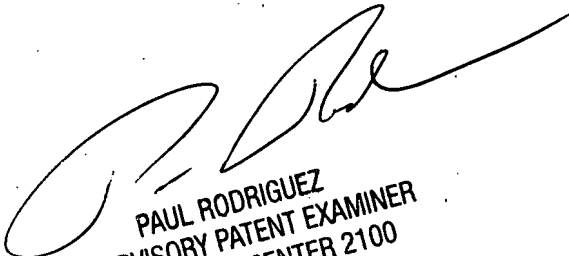
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MCJ  
7/17/07



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SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100